

What is claimed is:

1. A polyvinyl alcohol polymer film comprising difference in retardation between two points separated by 1 cm along the TD
5 direction of the film is 5 nm or less.
2. The polyvinyl alcohol polymer film according to Claim 1, wherein the polyvinyl alcohol polymer film is used for a polarization film.
3. A polarization film produced by using the polyvinyl alcohol
10 polymer film for a polarization film according to claim 2.
4. A method of producing a polyvinyl alcohol polymer film which comprises the step of contacting a polyvinyl alcohol polymer with a surface for drying (first drying surface) to obtain the polyvinyl alcohol
15 polymer film, wherein the length of the first drying surface is within the range of 3 m to 200 m, and the water content of the film when peeled after passing through the first drying surface is 50% by weight or less.
5. The method of producing a polyvinyl alcohol polymer film according to Claim 4, wherein both sides of the polyvinyl alcohol
20 polymer film are dried to form a film in two stages of said first drying surface and a subsequent second drying surface or in more stages, while one side of the film being dried by the first drying surface and the other side of the film being dried by the second drying surface.
6. The method of producing a polyvinyl alcohol polymer film
25 according to Claim 5 wherein the length of said second drying surface is set as 1.2 times or less of the length of said first drying surface.
7. A method of producing a polyvinyl alcohol polymer film for a polarization film by the method of producing a polyvinyl alcohol polymer film according to Claim 4.
- 30 8. A method of producing a polyvinyl alcohol polymer film for a

polarization film by the method of producing a polyvinyl alcohol polymer film according to Claim 5.

9. A method of producing a polyvinyl alcohol polymer film for a polarization film by the method of producing a polyvinyl alcohol polymer film according to Claim 6.

10. The polyvinyl alcohol polymer film according to Claim 1 produced by the method of producing a polyvinyl alcohol polymer film according to Claim 4.

11. The polyvinyl alcohol polymer film according to Claim 1 produced by the method of producing a polyvinyl alcohol polymer film according to Claim 5.

12. The polyvinyl alcohol polymer film according to Claim 1 produced by the method of producing a polyvinyl alcohol polymer film according to Claim 6.